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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,667	11/06/2000	Arnold Karel Jansen Van Doorn	PHN-17.714	8978

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
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EXAMINER

PAYNE, DAVID C

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 08/24/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/706,667

Applicant(s)

JANSEN VAN DOORN, ARNOLD
KAREL

Examiner

David C. Payne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 3, 5, 6 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 5 recites the limitation "Communication system according to claim 4" in line 1. There is insufficient antecedent basis for this limitation in the claim. Applicant has canceled claim 4. Likewise, claim 6, which is dependent upon claim 5, also lacks antecedent basis.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen US 5,915,205 A (hereinafter Chen) in view of Williams US 6,151,559 A (hereinafter Williams).

Regarding claim 1, Chen disclosed

Communication system, comprising: a network (Figure 2), a headend and that may be subjected to potential noise sources (see col./line: 5/7-10), wherein the communication system includes an adaptive filter (see col./line: 5/15-18) coupled between the potential noise sources (e.g., 214 of Figure 2) and a headend (see col./line: 5/7-10), which filter has a cut-off frequency (see col./line: 2/52-55, 5/47-50), dependent on the noise frequency (see col./line: 3/10-15), wherein the adaptive filter blocks detected noise from passing upstream through the communication system (see col./line: 2/40-45) and enables substantially undisturbed upstream communication above the cut-off frequency of the filter (see col./line: 2/52-55).

Chen does not illustrate a transmitter in the headend (202 of Figure 2) but does allude to this component which is necessary for transmitting signals downstream as well known in the art (see col./line: 5/10-12) which are subject to upstream noise (see col./line: 5/7-10). It is noted that an optical transmitter is inherent an optical headend as shown in Chen.

Chen does not disclose that the noise is impulse noise, that the filter prevents clipping of the transmitter nor a noise detector.

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Williams disclose a system for characterizing undesirable noise in an optical cable system (Figure 1). Williams further disclosed a filter (116 of Figure 1) in front of an optical transmitter (108 of Figure 1). This filter being necessary to protect a transmitter from impairments (col./line: 4/2-13) from the test scenario of impulse noise (see e.g., col./line: 10/67, 11/1) that demonstrates clipping at the transmitter (see e.g., col./line: 10/40-45). Williams further disclosed a noise detector (or trigger circuit col./line: 6/35-45).

It would have been obvious to one of ordinary skill in the art at the time of invention that the adaptive filter of Chen (see col./line: 5/15-18) would be used to filter out upstream impulse noise that could cause clipping in a downstream transmitter as demonstrated by Williams.

One finds motivation to conclude this since Williams disclosed tests for this type of noise which is the "... most common form of return band impairment ..." which is "... powerful enough to distort, or drive return active devices into a non-linear mode ..." (see William col./line: 2/1-14). Furthermore it would have been obvious to one of ordinary skill in the art at the time of invention to use a noise detector or (trigger circuit see Williams col./line: 6/35-45) to detect and filter impulse noise in an adaptive system such as Chen's. One finds motivation to use the noise detector (trigger) in Williams "Thus it is possible to estimate the amount of time the baseband noise trajectory 312 spends outside of the threshold region 332 by allowing it to spin, and detecting the threshold crossing points, 406, 408, 410 and 412 with a trigger circuit that inputs to a totaling counter (6/39-45)."

Regarding claims 3 and 7,

Chen disclosed the aforementioned invention but does not describe his adaptive filter in

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terms of a high-pass and low-pass filter.

Williams disclosed wherein this filter (116 of Figure 1, col./line: 4/25-30) is arranged in terms of a high pass filter (136 of Figure 1) and/or a low pass filter (138 of Figure 1). It would have been obvious to one of ordinary skill in the art at the time of invention to arrange the Chen filters in this fashion in order to filter out the noise burst that typically occur between 5 and 15 Mhz as disclosed in Williams (col./line: 2/1-5). Furthermore, the high-pass and low-pass filters operate to pass signals in the downstream ranges 54 to 550 MHz (see Williams col./line: 1/32-35) and the upstream ranges 5 to 30 MHz (Williams col./line: 1/49-50).

7. Claims 5 and 6 (as understood based on the 112 rejection) are rejected under 35 U.S.C.

103(a) as being unpatentable over Chen US005915205A (Chen) and Williams US 6,151,559 A (hereinafter Williams) as applied to claim 1 above, and further in view of Izakson et al. US 4,207,543 (Izakson).

Re claim 5

The Chen and Williams invention as taught does not disclose a communication system wherein the communication system comprises a threshold detector and a controllable switch having a control input coupled to the threshold detector. Izakson (Figure 4, e.g., col./line: 6/28-55) disclosed an amplitude detector (13) that detects the output of a threshold circuit (10). It would have been obvious to one of ordinary skill in the art at the time of invention to use a threshold detector in the Chen and Williams invention for the benefit of

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detecting/adapting a signal detection in the presence of a changing noise environment

Re claim 6

Chen disclosed a communication system (Figure 4) wherein in the communication system comprises a summing device (430) for summing at least one filtered version of an impulse noise containing RF signal.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Dcp

A handwritten signature in black ink, appearing to read "D. Payne", with a long horizontal flourish extending to the right.

David C. Payne
Patent Examiner
AU 2633